CLAIMS

1. A data processing apparatus comprising:

means for generating a signal representative of recorded data on a data storage medium;

filtering means for receiving the generated signal and equalising the generated signal response at a predetermined level; and

signal correcting means for detecting a plurality of multiple-bit data representative of the equalised signal and processing said multiple-bit data in dependence upon a predetermined set of data correction rules which, in operation of the apparatus, has the effect of enhancing the detection capability of the apparatus.

2. A data processing apparatus as claimed in claim 1, wherein the set of data correction rules is selectively applied to a portion of the multiple-bit data, such application being based upon a comparison of said multiple-bit data with predetermined multiple-bit sequences and wherein the portion of the multiple-bit data are corrected in dependence upon the comparison.

3. A data processing apparatus as claimed in claim 2, wherein the multiple-bit data are corrected by interchanging and/or shifting the polarities of a number of data-bits at said portion of the multiple-bit data.

4. A data processing apparatus as claimed in claim 2 or 3, wherein the set of data correction rules is selectively applied at a plurality of data-bit locations associated with said portion.

5. A data processing apparatus as claimed in any of claims 2 to 4, wherein the data corrections are effected in a manner which takes account of amplitude variations in the signal representation of the recorded data and the detected data.

6. A data processing apparatus as claimed in any of claims 2 to 5, wherein the data corrections are effected additionally in dependence upon the combination of bit-polarities of the detected data distribution.

7. A data processing apparatus as claimed in any preceding claim, wherein the filtering means is arranged to provide an enhancement of the generated signal response to be detected.

8. A data processing apparatus as claimed in claim 7, wherein said response is subject to a certain target distribution.

9. A data processing apparatus as claimed in any preceding claim, wherein the signal correcting means comprises a zero-threshold detector.

10. A data processing apparatus as claimed in claim 9, further comprising processing means connected to the output side of the detector.

11. A data processing apparatus as claimed in claim 10, wherein said processing means comprises a plurality of interconnectable processors, each processor being operable to correct the data in accordance with one or more different correction criteria for enhancing the detection capability of the apparatus.

12. A method of enhancing the detection capability of a data processing apparatus comprising:

generating a signal representative of recorded data on a data storage medium;

equalising the generated signal response at a predetermined level, and

detecting a plurality of multiple-bit data representative of the equalised signal and processing said multiple-bit data in dependence upon a predetermined set of data correction rules.

13. A method as claimed in claim 12, wherein said processing of the data is effected in dependence upon different energy criteria.

14. A method as claimed in claim 13, wherein the data are corrected so that the error energy amount associated therewith after correction is not more than the error energy amount prior to correction.

15. A method as claimed in any of claims 12 to 14, further comprising identifying error events and devising correction rules to correct errors at predetermined data-bit locations associated with the detected data distribution.

16. A data processing system incorporating means for detecting multiple-bit data representative of an equalised signal and means for processing said data in dependence upon a predetermined set of data correction rules such as to enhance the detection capability of the system.

17. A data processing system as claimed in claim 16, wherein said data are processed sequentially or parallelly in accordance with two or more different kinds of data correction rules, one or more rules at a time.

18. A data processing system as claimed in claim 17, wherein said data are processed in accordance with said different kinds of data correction rules having different sequence pathways associated therewith.